REMARKS

This responds to the Office Action mailed on June 5, 2006, and the references cited therewith.

Claims 59-106 are pending in the application. However, claims 59-73, 77 and 85-106 have been withdrawn from consideration. Thus, claims 74-76 and 78-84 are now being examined in the application.

Claim 74 is amended. In particular, to clarify the language of claim 74, the phrase, "adapted to be" has been deleted from the second line of claim 74. Applicant submits that no new matter has been added to the application.

§102 Rejection of the Claims

Claims 74-76 and 78-84 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by 5,750,376 to Weiss et al. According to the Examiner, although Weiss discloses only cells, the cells described by Weiss et al. can be adapted to coupled to an electrical interface.

Claim 74 is now directed to an implantable physiological or pathophysiological biosensor comprising: in vitro or ex vivo modified stem cells are coupled via an electrical interface to endogenous tissue or cells, wherein the in vitro or ex vivo modified stem cells are adapted to be implanted into a mammalian subject at a site distant from a natural site for a physiological or pathophysiological function of the subject, and wherein the in vitro or ex vivo modified stem cells can monitor a chemical, physiological or pathophysiological variable associated with the physiological or pathophysiological function of the subject and can produce a coagulation factor, serotonin, a growth factor, a hormone, or a receptor.

Applicant submits that the Weiss et al. patent provides no disclosure whatsoever of a biosensor that includes both cells and an electrical interface. The Weiss et al. patent is limited to disclosure of neural stem cells and provides no teaching on coupling such neural stem cells to an electrical interface. Contrary to allegations made by the Examiner, Weiss et al. at col. 22, lines 56-60 and at col. 23, lines 37-45, merely describes implantation of cells, not implantation of a biosensor that includes both cells and an electrical interface. Nor does the Weiss et al. patent disclose a biosensor (including cells and an electrical interface) that can monitor a chemical, physiological or pathophysiological function.

The Examiner also alleges that Weiss et al. discloses a biosensor being "adapted to be implanted into a mammalian subject." According to the Examiner, such "adapted" language indicates a mere intended use, does not require biosensor implantation, and therefore does not confer a patentable distinction over the Weiss et al. disclosure.

Applicants submit that use of the "adapted" language with respect to implantation is appropriate because the claimed invention is free of the prior art without further changes. Thus, nowhere do Weiss et al. disclose a biosensor (with both cells and an electrical interface). Instead, the Weiss et al. disclosure is limited to neural stem cells. Hence, the present claims are appropriately directed to biosensors (including both the recited cells and an electrical interface) that have not yet been implanted and to such biosensors that are implanted. The prior art does not teach such biosensors and Applicants are entitled to claims directed to biosensors prior to implantation and after implantation.

The Examiner further alleges that the dependent claims are anticipated by the Weiss et al. patent. However, because claims 75, 76, 78-84 depend ultimately from claim 74, they incorporate all of the subject matter of claim 74, and are therefore directed to a biosensor that includes both cells and an electrical interface. As described above, Weiss et al. do not disclose such a biosensor. Therefore, Weiss et al. disclose none of claims 74-76 and 78-84.

Applicant respectfully requests withdrawal of this rejection of claims 74-76 and 78-84 under 35 U.S.C. § 102(b).

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (516) 795-6820 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date September 5, 2006 By /Robin A. Chadwick/
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 5th day of September 2006.

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Name

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